AMENDMENTS TO CLAIMS

Please cancel claims 17-69 without prejudice of disclaimer.

Please amend the claims to read as indicated below.

1. (Currently Amended) A process for producing ~~a~~ an orthopedic component, comprising:

a. casting a blank ~~using~~ in a metal mold ~~which imparts~~ providing sufficient conductive heat transfer from the blank to rapidly cool ~~achieve rapid cooling of~~ the blank ~~in order to~~ and produce ~~a blank which features~~ a refined grain structure therein ~~sufficient to prevent cracking or non-uniform flow during forging~~; and

b. subsequently forging the blank to further refine the microstructure by further reducing grain size, and thereby produce said component.

2. (Original) A process according to claim 1 in which the blank is cast from a cobalt chrome alloy.

3. (Original) A process according to claim 2 in which the cobalt chrome alloy is a Co-28Cr-6Mo alloy.

4. (Original) A process according to claim 1 in which the blank is cast from a titanium alloy.

5. (Original) A process according to claim 1 in which the blank is cast from a zirconium alloy.

6. (Original) A process according to claim 1 in which the blank is cast from a stainless steel alloy.

7. (Original) A process according to claim 1 in which the casting process is a gravity metal mold process.

8. (Original) A process according to claim 1 in which the casting process is a vacuum die casting process.

9. (Currently Amended)A process according to claim 2 in which the blank after casting and before forging has ~~features~~ ~~a~~ an average grain size smaller than 300 μm.

10. (Currently Amended)A process according to claim 2 in which the blank after casting and before forging has ~~features~~ ~~a~~ an average grain size smaller than 150 μm.

11. (Currently Amended)A process according to claim 2 in which the blank after casting and before forging has ~~features~~ an ultimate tensile strength of at least 665 MPa.

12. (Original) A process according to claim 3 in which the component after forging complies with ASTM F-799-96.

13. (Currently Amended) A process for producing an orthopaedic component, comprising:

a. casting a blank from a cobalt chrome alloy ~~using~~ in a metal mold ~~which imparts~~ providing sufficient conductive heat transfer from the blank to ~~achieve cooling of~~ cool the blank ~~in order to~~ and produce a grain size smaller than 300 μm and ultimate tensile strength of at least 665 MPa; and

b. subsequently forging the blank to further refine the microstructure by further reducing grain size, and thereby produce ~~said component, the~~ a component complying with ASTM F-799-96.

14. (Original) A process according to claim 13 in which the casting process is a gravity metal mold process.

15. (Original) A process according to claim 13 in which the casting process is a vacuum die casting process.

16. (Currently Amended) A process according to claim 13 in which the average grain size of the blank is smaller than 150 μm.

Please add the following new claims.

70. A process according to claim 1, wherein the forging results in a reduction in average grain size by approximately 95%.

71. A process according to claim 1, wherein the average grain size after forging is at most 17.1 μm.

72. A process according to claim 13, wherein the forging results in a reduction in average grain size by approximately 95%.

73. A process according to claim 13, wherein the average grain size after forging is at most 17.1 μm.